

Educational Level and Gender Differences in EFL Learners' Learning Approach

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Abstract – Learning approach refers to the amalgamation of motives and strategies exploited by students during a learning task. It is categorized as surface and deep approaches to learning. Deep approach is based on higher order thinking skills including, evaluation and synthesis and personal commitment to learn the material, not just for the purpose of passing the course. Deep approach involves searching for meaning and linking new information with prior experience. Students with surface strategies, on the other hand, prefer memorization and rote learning. These students attempt to avoid failure with the minimum engagement and effort. Learning approaches are vulnerable to contextual and individual factors. The present study delved into EFL learners' deep learning approach by examining educational level and gender differences in the adaptation of deep approach. To do so, the Persian version of the "revised study process questionnaire" translated and validated by Ghanizadeh and Allahdadi (2015) was used. It has two main scales. Deep approach (DA) and surface approach (SA) with four subscales: deep motive (DM), deep strategies (DS), surface motives (SM) and surface strategies (SS). The participants comprised one hundred eighty BA and MA Iranian university students studying English language teaching and translation. The results of independent *t*-test indicated that the adaptation of deep approach is more frequent among MA students in comparison with their BA counterparts. Male and female students, nevertheless, did not differ in their adaptation of deep approach.

Keywords: deep learning approach, surface learning approach, educational level, gender, independent samples *t*-test

1. INTRODUCTION

In psychological terms, learning is defined as a relatively permanent change in behavior that occurs through experience. According to educationalists, many factor can influence on good learning. One of these factors is the approach that a learner adopts during learning. Student approaches to learning (SAL) is a research perspective that originated in Europe and Australia with the aim of understanding how students set about the task of learning and SAL comprise both a motive (why they learn) and a related learning strategy (what they do) (Biggs, 1987). Biggs (1987) mentioned that approaches to learning refer to the learners' various ways of relating to the learning task; so how and why a learner learns is important, in addition to the strategies devised by the students to solve the problems defined by their

motives (the why of learning). He explained that a deep motive is meaning-oriented and it is intrinsic. Deep strategies consist of an attempt to integrate new knowledge as well as extensive reading. The focus in surface motive is on meeting the requirements for students' assessment and surface strategies focus on recalling the essential parts by rote-learning. Combination of motive and strategy is called an approach to learning.

SAL theory has in fact become a meta-theory for conceptualizing teaching and learning, which has two major directions: phenomenography (Marton & Saljö, 1976) and constructivism and systems theory (Biggs, 1999). However, the notion that students, perceptions, and learning-related activities are central to teaching and learning is common to all SAL sub-theories (Biggs, 1993, 1999; Entwistle & Ramsden, 1983).

The learning approaches are sensitive to contextual and personal logical factors (e.g., course perceptions, conceptions of learning) (Biggs, 2001; Entwistle, Tait, & McCune, 2000; Prosser, Trigwell, Hazel, & Waterhouse, 2000) and generally influence learning outcomes (Biggs, 2001; Marton & Saljö, 1976a, b). Different factors can influence adopting a deep learning approach. In this study, educational level and gender are hypothesized to affect employment of a deep learning approach.

2. REVIEW OF THE LITERATURE

It was Marton (1981) who introduced the concept of approaches to learning. The difference in the two approaches – deep approach and surface approach – is perceived in the intentions and the process that follows to achieve the objective and it is clear that the approach adopted by the learner is variable over time and situations. Marton and Saljö (1976) noted that students who take two approaches to learning belong to two different groups of learners. The first group who study for the overall understanding and meaning pick the deep approach to learning, but those studying disconnected facts, separated ideas, and rote memorization adopt the surface approach. Biggs (1979) developed structure-linking study approaches and motivation; he introduced a learning process complex which refers to students' motives and strategies for learning. The surface approach is based on extrinsic motivation, so that learning is considered as a means towards an end such as passing an examination or getting a job. Usually, little effort is dedicated towards achieving the goal with minimal time and stress. Selected strategies are limited to basic essential parts such as memorization through rote learning. While the deep approach is built on the foundation of interest in the subject matter of the task.

Entwistle and Ramsden (1983) studied students' approach to learning and came up with the idea that deep learning is based on higher order thinking skills, including, evaluation and synthesis and personal commitment to learn the material, not just for the purpose of passing the course. Deep approach involves searching for meaning and linking new information with prior experience, while surface approach involves rote memorization of information. Students with surface strategies, on the other hand, prefer memorization and rote learning. These students attempt to avoid failure with the minimum engagement and effort (Cano, 2007).

Evans, Kirby, and Fabrigar (2003) mentioned that deep approaches involve reading widely, thinking about what one has read and making connections with prior knowledge. The use of deep approach to learning includes strategies and motives that accompany meta-cognitive outcomes (Son, 2004) and Entwistle and Ramsden (1995) mentioned that when these strategies are integrated in instruction, students' meta-cognition are better facilitated. So it can be said that deep approach is a combination of deep motive and deep strategy and surface approach is a product of surface motive and surface strategy (Biggs, 1987). It is believed that that deep learning happens when the student is really eager to achieve the highest level of learning and wants to solve a problem or do a task; for achieving this purpose the learner should not only understand the new information but also remember it and should try to know the different applications of the new information in new situations, in this way the student should restructure his/her brain and that demands effort (Biggs, 1999).

The educational research of the past years (Marton & Saljo, 1976; Marton, Hounsell, & Entwistle, 1997; Prosser & Trigwell, 1999; Biggs, 1999) is mostly about effective learning and the learner has become of central role in the teaching/learning interaction – e.g., teacher has lost the main role in the classroom and it has become preferable to put the burden of learning on learner's shoulder; so, students should do their best in order to communicate with each other, do the task through group work, and the teacher work mainly as an advisor. In other words, what the learner does has become more important for student learning than what the teacher does. This has led to the redefinition of teaching as the facilitation of student learning. One of the consequences of this shift has also been the redefinition of course objectives in terms of learning outcomes rather than of teaching inputs. The present researchers take into consideration that students can take different approaches to learning. These approaches are not permanent traits in individuals, although some students will tend towards taking a deep approach while others will tend towards taking a surface approach (Biggs, 1999). Rather, it is suggested that good teaching can help students to take a deep approach, while poor teaching in most situations can pressure students to take a surface approach. Biggs (1999) elaborates on good teaching as the encouragement of a deep approach to learning.

Kember (2004) outlined four characteristics of deep learning, including:

1. A well-structured knowledge base with a focus on concepts, integration of knowledge, and a cumulative experience.
2. An appropriate motivational level, with an emphasis on intrinsic motivation and a sense of "ownership" of the material.
3. Learner activity associated with active, not passive, learning.
4. Interaction with others, including student-teacher interactions and student-student interactions.

Laird, Shoup, Kuh, and Schwarz (2008) explained that deep processing or deep learning involves the critical analysis of new ideas and linking them to already known concepts and principles which leads to understanding and long-term retention of concepts so that they can be used for problem solving in unfamiliar contexts. Deep learning represents

approaches that focus on integration, synthesis, and reflection. Students who use deep approaches to learning perform better as well as retaining, integrating and transferring information at higher rates than students using surface approaches to learning (Laird, Shoup, Kuh, & Schwarz, 2008). Deep approaches are usually preferred because students look beyond the sign associated with information (surface approaches) to the more important underlying meaning (Marton & Saljö, 1976). Also, deep approaches can be linked to deep learning outcomes (Abbott, Townsend, Johnston-Wilder, & Reynolds, 2009; Biggs et al., 2001).

Students have their own preference learning approach, which can either be more surface or deep. This preferred learning approach is not only personally stated, teaching context also seems to play an important role in students learning approach. The educational context could enhance student deep level of learning approach, which could be positive for students learning outcomes (Biggs, 2001).

Indeed, the crucial aim of good teaching is exactly to encourage students to adopt a deep approach and to discourage the use of a surface approach. Teachers should make the student use deep approaches (Biggs, 1999). A different specific reason that a student has in mind will shape his choice of learning approach (Bernardo, 2003). Recent studies were consistent in substantiating these components of approaches to learning (e.g., Bernardo, 2003, Biggs, Kember, & Leung, 2001, Kember, Biggs, & Leung, 2004; Varasteh, Ghanizadeh, & Akbari, 2016). A wide range of research has been done to examine the structure of personal values (Allport, 1924, Feather, 1975,; Schwartz, 1994) and learning approaches (Biggs, 1987; Marton & Saljo, 1976). These studies have many sides and encompass a variety of domains and academic directions. For example, Ng and Renshaw (2002, 2003) correlated achievement goals with personal values that were in line with deep approach to learning, while performance goals were consistent with a surface approach. This relationship was validated by a number of studies (Chan, 2002; Grant & Dweck, 2001; Hau & Salili, 1996; Biggs, 1993; Lietz & Matthews, 2010; Salili, 1996; Watkins, 2003; Wilding & Andrew, 2006).

Picou, Gatlin-Watts, and Packer (1998) studied the relationship between learning approaches and achievement, and the effect of gender and academic discipline. They concluded that female students have logical steps for problems. Cano (2005) reported that older female students prefer to adopt deep approaches to learning in comparison to younger male students. He also noted a decrease from junior to senior high school with considering the deep and surface learning approaches both in females and males. Moreover, Jone, Reichard, and Mokhari (2003) studied 105 college students to find out the preferences for choosing an approach to learning. Results revealed that differences in choosing an approaches is associated with disciplines. Smith (2005) studied the learning approaches of 248 students of business and psychology. The results revealed that psychology students prefer to use deep motive and deep strategies.

Subasinghe and Wanniarachchi (2003) explored the correlation between the approach to learning and the academic performance of medical students. The result showed that they prefer deep strategies. Kumar and Sethuraman (2007) reported that most high achievers prefer deep strategies while low achievers tend to use superficial approaches. This indicates that students who adopt deep approaches to learning have a better performance and vice

versa. Those who tend to use deep approaches are interested in the content of material or relevancy of it to their vocation. The deep approach helps students remind factual details more effectively. Students adopting superficial approaches are motivated to complete the course or fulfilling the requirement by memorization of material because they just fear from failure. High achievers use either the surface or deep approach depending on what they see as the most successful result.

Floyd, Harrington, and Santiago (2009) assessed the relationships among value of the course, engagement of the student, deep learning strategies, and surface learning strategies. As the results showed, the value of the course has a positive effect on deep learning and students' involvement. The ultimate goal of reaching deep learning can be achieved through increasing the content value and involvement. So students use deep strategies when they are more involved in the process of learning and the content of the course is valuable for them Bilgin and Crowe (2008) explored the approaches to learning in statistics. They found that post graduate students used deeper approaches while under graduate students prefer surface approaches to learning. Keeler and Steinhorst (1995) showed the effect of teaching and learning approaches imposed by teachers. . In a related vein, Cooper (2004) conducted a comparative longitudinal study of Australian and Malaysian Chinese students at RMTT University. It identified differences in the learning approaches of the two groups and the result indicated that Chinese male students prefer deep strategies while Australian students adopt surface strategies. Kember (2000) found that the use of deep and surface approach depends on the nature of the assessment task and course requirements. Gijbels and Dochy (2006) showed that there was a relationship between students' approaches to learning and their assessment preferences. In addition, Ramsdon (1984) reported that science students rely on operation learning much more than Art students who scored better on comprehension learning. In a recent study, Varasteh, Ghanizadeh, and Akbari (2016) showed that EFL students with high task value, self-regulation and ambiguity tolerance are more inclined to use deep learning strategies leading to high language achievement. According to Evans, Kirby, and Fabrigar (2003), school ability can be used to increase self-efficacy and deep approach to learning and helps learners transform their ability into academic skills. The expected effects of school ability on deep and surface approach is different from the concept of Biggs (1987), Entwistle and Ramsden (1983), and Watkins (1996) where deep approaches to learning should result to increased ability and the opposite is expected for surface approach to learning, but the results of this study are consistent with Asian samples (Bernardo, 2003). These results showed a reversed impact of ability on deep and surface approach.

Holloway (1988) found that western cultures usually attribute success to ability, Asian cultures attribute success to effort. So each of them will be different in adopting a certain kind of approach. Baumgart and Halse (1999) found that western learners are independent, favoring deep and conceptual approaches in contrast with Asian learners who are favoring rote-learning and memorization which are associated with surface approach. Entwistle, Tait, and McCune (2000).identified three motivational factors which show that there is a link between deep approach and comprehension learning with intrinsic motivation. Also a connection between surface approach, operation learning, and both fear of failure and extrinsic motivation was found. Kember (2000) found that students often move between

surface and deep approaches depending upon the nature of the assessment task or course requirements. Gijbels and Dochy (2006) showed that there was a relationship between students' approaches to learning and their assessment preferences. According to Entwistle and Ramsdon (1983), different approaches need different balance and process. It was observed that science students rely on operation learning much more than art learners who have a higher score on comprehension learning. Thus the meaning of each approach needs to be reinterpreted within each subject area and discipline. Learners who adopt surface learning strategy are trying to avoid failure with the minimum amount of effort and involvement (Cano, 2007). Draper (2009) expanded upon this idea by concluding that those who adopt surface learning approach understand the material correctly, but do not create a link between concepts while those who adopt deep strategies can transfer the learned concepts to a variety of conditions and focus on the concepts applicable to problem solving. Hulleman (2007) found that relevance interpretation can increase perception of value which is leading to increased interest and classroom performance, particularly among learners with lower levels of belief in their abilities. So it can be concluded that engagement, course value, relevance and meaningfulness of tasks are important considerations in choosing a type of learning approach.

As demonstrated by the above literature on learning approach, it appears that this factor has received considerable attention among educationalists. Plenty of studies in various academic disciplines (such as, different science branches, arts, medicine, statistics) and among learners with different backgrounds have been conducted and substantiated the multi-faceted nature of learning approaches and their association with factors and constructs conducive to effective learning. Nevertheless, it seems the construct remained quite unexplored in the realm of L2 education. More specifically, to the researchers' best knowledge, no documented study up to now has substantiated the effect of educational level and gender on students' adaptation of deep learning approach.

Due to the prominent position of learning approach in educational studies the present study set out to answer the following questions:

1. Does EFL learners' educational level influence the adaptation of deep approach?
2. Does the adaptation of deep approach differ across male and female EFL learners?

3. METHOD

3.1. Participants

The participants of this study consisted of one hundred eighty BA and MA Iranian university students studying English language teaching (TEFL) and translation at Imam Reza International University. The sample included 40 males and 140 females; aged from 18 to 42. The convenience sampling was used due to the accessibility and features related to the purpose of the investigation. Students' participation was completely voluntary and they were not required to write their names on the questionnaires. They were asked to provide information on their educational level, major, age, gender, current term of study, and grade point average (GPA).

3.2 Instrumentation

3.2.1. Revised Study Process Questionnaire (R-S-PQ-2F)

The revised study process questionnaire was designed and validated by Biggs, Kember, and Leung (2001). It consists of 20 items and employs a 5-point Likert scale ranging from 1 (never true of me) to 5 (always true of me). It has two main scales. Deep approach (DA) and surface approach (SA) with four subscales, deep motive (DM), deep strategies (DS), surface motives (SM) and surface strategies (SS). Each contains 5 items. The items measuring each scale and subscales are as follows= DA= 1+2+5+6+9+10+13+14+17+18 (DM= 1+5+9+13+17, DS= 2+6+10+14+18), and SA= 3+4+7+8+11+12+15+16+19+20 (SM= 3+7+11+15+19, SS= 4+8+12+16+20). Sample items for DA includes “I find that at times studying gives me a feeling of deep personal satisfaction.” Sample item for DS is as follows: “I find most new topics interesting and often spend extra time trying to obtain more information about them.” Sample item for SM is: “my aim is to pass the course while doing as little work as possible.” Sample item for SS is “I learn something by rote, going over and over them until I know them by heart if I do not understand them.” The scale enjoys an acceptable Cronbach’s alpha value for each subscale reported by designers is as follows: DM= 0.62, DS= 0.63, SM= 0.72, SS= 0.57. The Persian version of R-SPQ-2 validated by Ghanizadeh and Allahdadi (2015) was used in this study. According to Ghanizadeh and Allahdadi (2015), this test has reliability and validity in Iranian culture. The chi-square/df ratio (2.78) and the RMSEA (.068) reached the acceptable fit thresholds. The reliability of the questionnaire estimated via Cronbach's alpha was found to be .692. The Cronbach's alpha estimates for each factor ranged from .61 to .65. (DM = .68, DS= .61, SM= .62, SS= .65). The reliability of DA was .77 and SA was .66. This demonstrated the reliability and validity of the Persian version of learning approach questionnaire. Deep and surface approaches negatively correlated with each other ($r = -.211, p < 0.05$). Deep motive had significant high correlation with deep strategies ($r = .650, p < 0.05$). The same also went for surface motive and surface strategies ($r = .598, p < 0.05$). Deep motive and surface motive were negatively associated ($r = -.235, p < 0.05$).

3.3. Data collection

After obtaining permission from instructors, students were introduced to the revised study process questionnaire (R-SPQ-2F). The questionnaire was given to the EFL university students who have been majoring in English language teaching and translation.

Then they were asked to answer the questionnaire carefully. To receive reliable data, the researcher explained how to answer the questionnaire and asked them not to complete the questionnaire by chance. All the students participated in the survey voluntarily. They were required to write their gender, age, educational level, major, current term of study. Confidentiality and anonymity consideration were observed.

4. RESULTS

Table 1 presents descriptive statistics of deep approach (deep strategies and deep motive) and surface approach (surface strategies and surface motive). As the table indicates, deep approach has a higher mean value ($M=28.52$, $SD= 6.21$) than that of surface approach ($M=25.07$, $SD= 5.79$).

Table 1: Descriptive Statistics of Deep Approach (Deep Strategies and Deep Motive) and Surface Approach (Surface Strategies and Surface Motive)

	N	Minimum	Maximum	Mean	Std. Deviation
Deep Motive	180	6.00	25.00	14.7333	3.60261
Deep Strategies	180	6.00	23.00	13.7889	3.23561
Surface Motive	180	5.00	24.00	11.3833	3.31625
Surface Strategies	180	7.00	21.00	13.6944	3.16245
Deep Approach	180	14.00	46.00	28.5222	6.21267
Surface Approach	180	13.00	45.00	25.0778	5.79198
Valid N (listwise)	180				

To examine whether there is any significant difference between BA and MA students regarding their deep learning, an independent samples *t*-test was run. Table 2 below summarizes the descriptive results of scores in deep learning in the two groups. As the table shows, the mean scores of deep learning across BA and MA students are different: 1) BA ($M=27.30$, $SD=5.95$), 2) MA ($M=30.83$, $SD=6.07$).

Table 2: Descriptive Statistics of Deep Learning across BA and MA Students

	Level	N	Mean	Std. Deviation	Std. Error Mean
Deep learning	BA (1)	115	27.3051	5.95497	.54820
	MA (2)	65	30.8387	6.07654	.77172

The following figure (Figure 1) illustrates the above finding. As it can be seen, MA students obtained higher scores in deep learning in comparison with their BA counterparts.

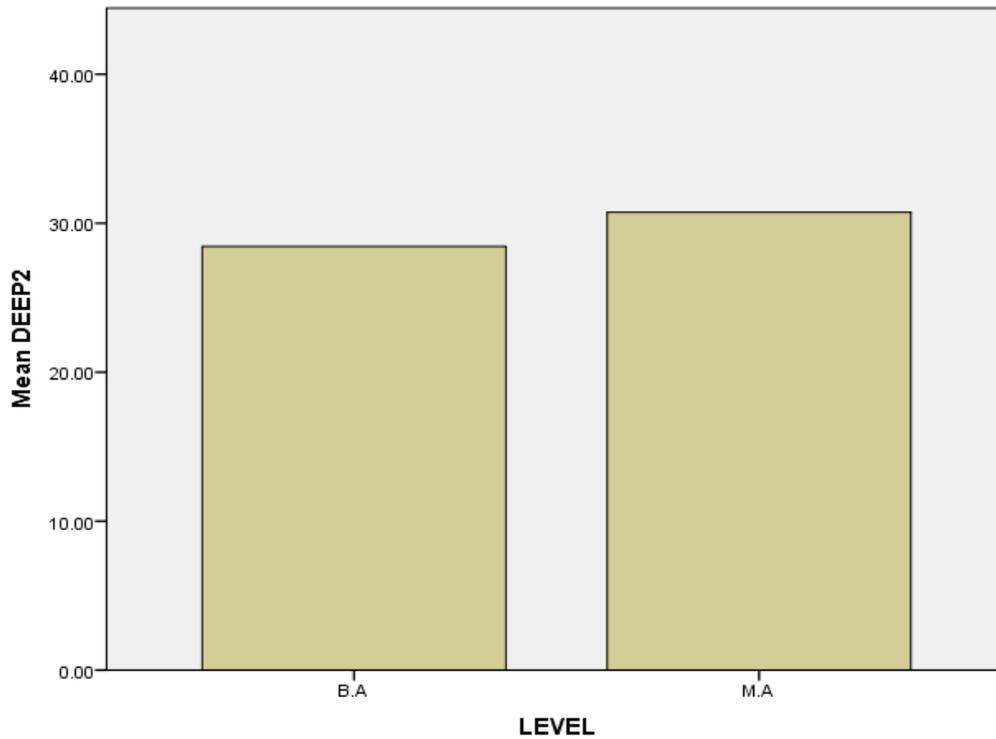


Figure 1. The bar graph representing the mean scores of deep learning across BA and MA students.

To see whether this observed difference is statistically significant, an independent samples *t*-test was run. Table 3 presents the results of *t*-test run on deep learning. As it can be seen, there is a statistically significant difference between the two groups regarding the degree of their deep learning ($t= -3.757, p<.05$). In other words, MA students statistically scored higher than their BA counterparts regarding the deep strategies they utilized in learning

Table 3: Independent T-Test on the Role of Level in Deep Learning

	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Deep learning	-3.757	178	.000	-3.5336	.94065

To investigate whether there is any significant difference between male and female students regarding their deep learning, an independent samples *t*-test was run. Table 4 summarizes the descriptive results of scores in deep learning among males and females. As the table illustrates, the mean scores of deep learning among male and female students are slightly different: 1) Females ($M=28.50, SD=6.13$), 2) Males ($M=28.62, SD=6.65$).

Table 4: Descriptive Statistics of Deep learning across Female and Male Students

	Level	N	Mean	Std. Deviation	Std. Error Mean
Deep learning	Female (1)	148	28.5000	6.13732	.50448
	Male (2)	32	28.6200	6.65146	1.17582

The following figure (Figure 2) illustrates the above finding. As it can be seen, male and female students' scores in deep learning are quite close to each other.

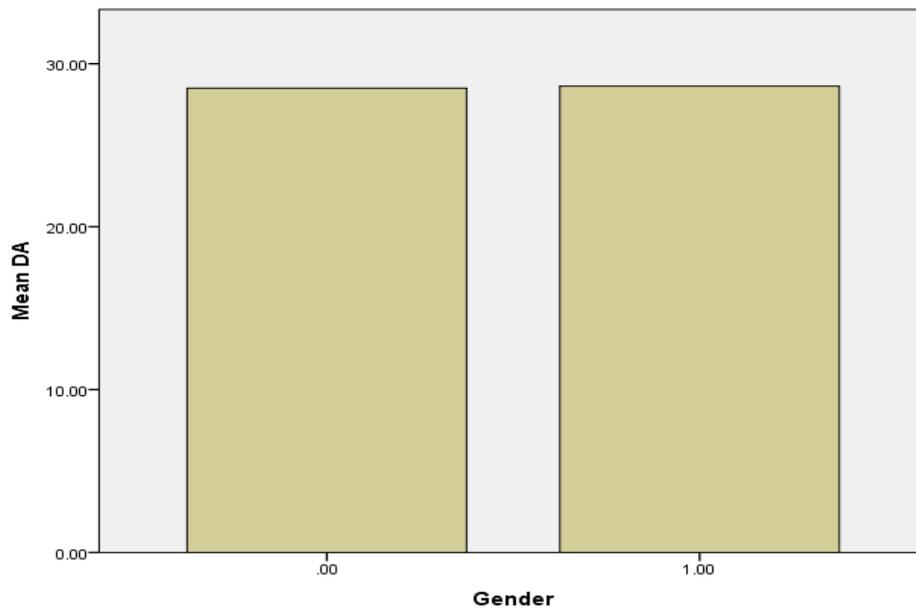


Figure 2. The bar graph representing the mean scores of deep learning male and female students.

To see whether this slight difference is statistically significant, an independent samples *t*-test was run. Table 5 presents the results of *t*-test. As it can be seen, there is not a statistically significant difference between the two groups regarding the degree of their deep learning ($t=-.103$, $p<.05$). In other words, female and male students scored identically regarding the deep strategies they utilized in learning.

Table 5: Independent T-Test on the Role of Gender in Deep learning

	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Deep learning	-.103	178	.918	-.12500	1.21454

5. DISCUSSION AND CONCLUSION

Despite the robust efforts some learners dedicate to learn a second language, they do not have a successful learning and do not act as effective learners. This failure can be rooted in cognitive and metacognitive factors. One of these factors pertains to learning strategies and motives behind a task, i.e., the domain of learning approach. It is believed that the approach adopted by the learner fluctuates with contextual and personal variations. The aim of the present study was to investigate the role of EFL learners' educational level and gender on the adaptation of deep learning. As the results showed, educational level had a significant role in the use of deep learning and there was a statistically significant difference between the two groups of MA and BA learners regarding the degree of their deep learning. In other words, MA students statistically scored higher than their BA counterparts regarding the deep strategies they utilized in learning. It is in harmony with previous studies in other disciplines and settings. Bilgin and Crowe (2008) explored the approaches to learning in statistics across graduate and undergraduate students. They found that post graduate students used deeper approaches while under graduate students preferred surface approaches to learning. Biggs (2001) mentioned that educational context could enhance student deep level of learning approach, which could be positive for students' learning outcomes. The effect of course level on adopting certain language-learning strategies has also been manifested in other studies (e.g., Ghrib, 2004). Ghrib (2004) explored the relation between course level and using learning strategies. The results revealed that course level significantly influenced choice of certain language-learning strategies. The lower level students employed resourcing, avoidance, translation, and borrowing strategies more frequently than did the higher level students who used social, affective, paraphrase, circumlocution, and simplification strategies.

This finding can also be explained in the light of attributes of deep approach adaptation. Laird, Shoup, Kuh, and Schwarz (2008) explained that deep processing or deep learning involves the critical analysis of new ideas and linking them to already known concepts and principles and results in understanding and long-term retention of concepts so that they can be used for problem solving in unfamiliar contexts. Marton and Saljo (1976) contended that those students who study for the overall understanding and meaning prefer deep approach to learning, but those studying disconnected facts, separated ideas, rote memorization opt for surface approach. Kember (2000) found that students often move between surface and deep approaches depending upon the nature of the assessment task or course requirements. It is undisputable that students at MA level are frequently involved in doing projects and research so they are likely to explore the subject beyond the immediate requirements and ask themselves questions about what they're learning, discuss their ideas with others and enjoy comparing different perspectives; try to develop their own understanding and make sense of what they are learning. Consequently, these factors lead to the adaptation of deep learning. Whereas, students at BA level might aim to meet requirements minimally and appear to focus on passing the exams rather than learning deeply the materials.

The findings of the second research question revealed no significant differences between males and females regarding the degree of their deep learning. In other words, female and male students scored identically regarding the deep strategies they utilized in learning. Wharton (2000) speculated when subjects were experienced second language learners, gender difference in the use of strategies was not significant. Cano (2005, 2007) indicated that there were no significant differences between males and females on their use of language learning strategies .

5.1. Limitations

The present study is limited in a number of ways: 1) Due to feasibility considerations, the participants were chosen according to convenience sampling; thus, the sample was biased towards those students who were more willing to participate. 2) This study comprised EFL university students from Mashhad. It did not include students from other provinces and other countries. It would be more comprehensive if students from other parts of country were included in our 180 samples of Iranian EFL learners. So this study should be replicated with samples from different parts of the country and use procedures that ensure a higher degree of randomization and ultimately more generalizability. In addition, the results may not have been entirely generalizable to students in other countries, as cultural differences may impact the results. 3) The data collection did not include qualitative approaches, such as interview and observation and the variables in question were assessed via questionnaires. Using qualitative approaches such as interviews, case studies, and observations to investigate these constructs would allow prospect researchers to understand not only if potential interrelationships exist among the constructs, but also the processes by which these constructs develop in the classroom context. 4) Lack of responsibility of some of participants for filling out the questionnaire might impact the results.

It is attempted to address at least a couple of limitations pertaining to the study. For instance, endeavor was made to include learners from various age groups and of both genders. Furthermore, the researcher attempted to principally situate the study within a firm and established theoretical framework. Only then, the hypotheses were formulated and tested.

REFERENCES

- Abbott, I., Townsend, A., Johnston-Wilder, S., & Reynolds, L. (2009). *Literature Review: Deep learning with technology in 14- to 19-year-old learners*: University of Warwick.
- Allport, F. H. (1924). *Social psychology*. Boston: Houghton Mifflin.
- Baumgart, N., & Halse, C. (1999). Approaches to learning across cultures: The role of assessment. *Assessment in Education*, 6, 321-340.
- Bilgin A.A.B., & Crowe S. (2008). Approaches to Learning in Statistics. *Asian Social Science*, 4(3), 37-43.
- Bernardo, A. B. I. (2003). Approaches to learning and academic achievement of Filipino students. *The Journal of Genetic Psychology*, 164, 114-101.

- Biggs, J. (1999). *Teaching for quality learning at university*. SRHE & Open University Press.
- Biggs, J. (1978). Individual and group differences in study process. *British Journal of Educational Psychology*, 48, 266-279.
- Biggs, J. (1987). *Learning process questionnaire: Manual*. Melbourne: Australian Council for Educational Research.
- Biggs, J. (1993a). What do inventories of students' learning processes really measure? A theoretical review and clarification. *British Journal of Educational Psychology*, 63, 1-17.
- Biggs, J. B. (1987). Student process questionnaire manual. Australian Council for Educational Research. *British Journal of Educational Technology*, 40 (2), 285-293.
- Biggs, J., Kember, D., & Leung (2001). The revised two-factor Study Process Questionnaire: R-SPQ-2F. *British Journal of Educational Psychology*, 71, 133-149
- Cano, F. (2005). Epistemological beliefs and approaches to learning: Their change through secondary school and their influence on academic performance. *British Journal of Educational Psychology*, 75, 203-221.
- Cano, F. (2007). Approaches to learning and study orchestrations in high school students. *European Journal of Psychology of Education*, 22(2), 131-151.
- Chan, K. W. (2002). *Students' epistemological beliefs and approaches to learning*. Paper presented at the AARE Conference, Brisbane, Australia, 1-5 December, 2002.
- Chang, S. C. (1989). *A Study of Learning Strategies Employed by Secondary Four Express and Normal Pupils*. Paper presented at the Sixth ASEAN Forum on Child and Adolescent Psychiatry, Singapore, Dordrecht, Netherlands: Kluwer.
- Draper, S. W. (2009). *Catalytic assessment: Understanding how MCQs and EVS can foster deep learning*.
- Entwistle, N.J. (1981). *Styles of Learning and teaching; an integrated outline of educational psychology for students, teachers and lecturers*. Chichester: John Wiley.
- Entwistle, N. J., & Ramsden, P. (1983). *Understanding student learning*. London: Croom Helm.
- Entwistle, N. J., Tait, H., & McCune, V. (2000). Patterns of response to an approaches to studying inventory across contrasting groups and contexts. *European Journal of Psychology of Education*, 15(1), 33-48.
- Evans, C. J., Kirby, J. R., & Fabrigar, L. J. (2003). Approaches to learning, need for cognition, and strategic flexibility among university students. *British Journal of Educational Psychology*, 73 (4), 507-528.
- Feather, N. T. (1975). *Values in education and society*. New York: The Free Press.
- Floyd, K.S., Harrington, S., & Santiago, J. (2009). *The effect of engagement and perceived course value on deep and surface learning strategies*. Macon State College, Macon, Georgia, U.S.A.

- Gijbels, D., & Dochy, F. (2006). Students' assessment preferences and approaches to learning: Can formative assessment make a difference? *Educational Studies*, 32(4), 399-409.
- Ghanizadeh, A., & Allahdadi, S. (2015). Validating the Persian versions of L2 ambiguity tolerance and learning approach scales and probing possible associations. *International Journal of Research Studies in Psychology*, 4 (3), 77-87.
- Grant, H., & Dweck, C. S. (2001). *Cross-cultural response to failure: Considering outcome attributions with different goals*. In F. Salili, C. Y. Chiu and Y. Y. Hong (Eds.), *Student motivation: The culture and context of learning* (Plenum series on human exceptionalism) (pp. 203- 219). New York: Plenum Publishers.
- Hau, K.T., & Salili, F. (1996). *Achievement goals and causal attributions of Chinese children*. In S. Lau (Ed.), *Growing up the Chinese way: The role of culture in socialization* (pp. 121-145). Hong Kong: The Chinese University Press.
- Holloway, S. D. (1998). Conceptions of ability and effort in Japan and the United States. *Review of Educational Research*, 58, 327-345.
- Hulleman, C. S. (2007). *The role of utility value in the development of interest and achievement*. Unpublished Doctoral Dissertation. University of Wisconsin-Madison.
- Jones, C., Reichard, C., & Mokhtari, K. (2003). Are students' learning styles discipline specific? *Community College Journal of Research and Practice*, 27, 363-375.
- Keeler, C. M., & Steinhorst, R. K. (1995). Using Small Groups to Promote Active Learning in the Introductory Statistics Course: A Report from the Field. *Journal of Statistics Education* [Online], 3(2). (<http://www.amstat.org/publications/jse/v3n2/keeler.html>)
- Kember, D. (2000). Misconceptions about the learning approaches, motivation and study practices of Asian students. *Higher Education*, 40 (1), 99-121.
- Kember, D (2004). Interpreting Student Workload and the Factors Which Shape Students' Perceptions of Their Workload Studies. *Higher Education*, 29(2), 165-184.
- Kember, D., Biggs, J., & Leung, D. (2004). Examining the multidimensionality of approaches to learning through the development of a revised version of the Learning Process Questionnaire. *British Journal of Educational Research*, 74, 261-280.
- Kumar, L. R., & Sethuraman, K. R. (2007). *Learning approaches in dental and medical students In AIMST: a comparison between deep and surface approaches*. Paper presented at: The International Medical Education Conference; 2007 April 20-21; Kuala Lumpur, Malaysia.
- Laird, T. F., Shoup, R., Kuh, G. D., & Schwarz, M. J. (2008). The effects of discipline on deep approaches to student learning and college outcomes. *Research in Higher Education*, 49, 469-494.
- Leamson, R. (2002). *Learning your first job*. Retrieved January 18, 2010, from <http://www.ctl.uga.edu/Learning/>.
- Lietz, P., & Matthews, B. (2010). The effects of college students' personal values on changes in learning approaches. *Research in Higher Education*, 51(1), 65-87.

- Marton, F. (1981). Phenomenography – Describing conceptions of the world around us. *Instructional Science*, 10, 177–200.
- Marton, F., & Säljö, R. (1976). On qualitative differences in learning _II, Outcome as a function of the learner’s conception of the task. *British Journal of Educational Psychology*, 46, 115-127.
- Ng, C. H., & Renshaw, P. D. (2002). *Self-schema, motivation and learning: A cross cultural comparison*. In D. M. McInernay and S. Van Etten (Eds.), *Research on sociocultural influences on motivation and learning (Vol. 2)* (pp. 55-87). Greenwich, CT: Information Age Publishing, Inc.
- Ng, C. H., & Renshaw, P. D. (2003). *Motivation and school learning*. In J. P. Keeves (Ed.), *Handbook of educational research in the Asia-Pacific region* (pp.495-510). Dordrecht: Kluwer.
- Picou, A., Gatlin-Watts, R., & Packer, J. (1998). A test for learning style differences for the U.S. border population. *Texas Papers in Foreign Language Education*, 3(2), 105-116.
- Ramsden, P. (1984). *The context of learning*. In F. Marton, D. Hounsell, & N. Entwistle (Eds.), *The experience of learning* (pp. 144-164). Edinburgh: Scottish Academic Press.
- Prosser, M., & Trigwell, K. (1999). *Understanding learning and teaching: the experience in higher education*. SRHE & Open University Press.
- Prosser, M., Trigwell, K., Hazel, E., & Waterhouse, F. (2000). Students’ experiences of studying physics concepts: The effects of disintegrated perceptions and approaches. *European Journal of Psychology of Education*, 15(1), 61-74.
- Ramsden P. (1992). *Learning to teach in higher education*. London: Routledge.
- Salili, F. (1996). Achievement motivation: A cross-cultural comparison of British and Chinese students. *Educational Psychology*, 16(8), 271-281.
- Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? Human values and social issues, current understanding and implications for the future. *Journal of Social Issues*, 50(5), 19-45.
- Smith, L. (2005). *An investigation into student approaches to learning at a multicultural university using the Revised Study Process Questionnaire*. Proceedings of Xth HERDSA Conference (pp. 533-541).
- Son, S. K. (2004). Spacing one’s study: evidence for a metacognitive control strategy. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 30, 601-604.
- Subasinghe, L.P., & Wanniachchi, D. N. (2003). *Approach to learning and the academic performance of a group of medical students any correlation?* FLP: University of Colombo.
- Trigwell, K., & Prosser, M. (1991). Improving the quality of student learning: The influence of the learning context and student approaches to learning on learning outcomes. *Higher Education*, 22, 251–266.

- Varasteh, H., Ghanizadeh, A., & Akbari, O. (2016). The role of task value, self-regulation, and ambiguity tolerance in predicting EFL learners' test anxiety, learning strategies, and language achievement. *Psychological Studies*, DOI 10.1007/s12646-015-0351-5
- Watkins, D. A. & Hattie, J. (1981). The learning process of Australian university students: Investigations of contextual and personological factors. *British Journal of Educational Psychology*, 51, 384-393.
- Watkins, D. (1983). Depth of processing and the quality of learning outcomes. *Instructional Science*, 12, 49 -53.
- Watkins, D. A. (1996). *Learning theories and approaches to research: A cross-cultural perspective*. In: D. A. Watkins & J. B. Biggs (Eds.). *The Chinese Learner: cultural, psychological and contextual influences* (pp. 3-34). Hong Kong and Melbourne: CERC and Australian Council for Educational Research.
- Watkins, D. A. (2003). *Student learning: A cross-cultural perspective*. In J. P. Keeves (Ed.), *Handbook of educational research in the Asia-Pacific region* (pp. 441-462).
- Wharton, G. (2000). Language learning strategy use of bilingual foreign language learners in Singapore. *Language Learning*, 50 (2), 203–243.
- Wilding, J., & Andrews, B. (2006). Life goals, approaches to study and performance in an undergraduate cohort. *British Journal of Educational Psychology*, 76, 171-182.